

## ABSTRACT

[0092] In accordance with a preferred embodiment of the invention, an antenna structure is provided having one or more antennae arranged so as to read all possible orientations of a randomly placed tag. Also provided in accordance with a preferred embodiment of the invention, is a method of configuring one or more antennae composed of the steps of: identifying the "dead zones" of each discrete antennae used, and orienting each antennae such that there are no "dead zones" common to all antennae. The unique antenna structure (and corresponding method) has particular application in tag reader antenna systems for use in RFID (radio frequency identification) applications (13.56 MHz) and the like. In accordance with an exemplary embodiment, multiple RF (radio frequency) antennae are utilized as part of an intelligent station to track items tagged with radio frequency identification (RFID) tags.